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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,896	06/04/2001	Naoto Ikegawa	208285US2	2166
22850	7590	07/06/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			UHLIR, NIKOLAS J	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b>	Application No. 09/871,896	Applicant(s) IKEGAWA ET AL.	
	Examiner Nikolas J. Uhler	Art Unit 1773	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 22 June 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): none.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 1-22.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: See attached Interview Summary

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1. continuation of box 5(c): The request for reconsideration has been considered but does not place the application in condition for allowance. The applicant once again argues that treating an insulating substrate with a nitrogen plasma results in the polymer substrate having unexpectedly improved adhesion to a metal layer deposited on the substrate.
2. To support their argument of unexpected results, applicants rely on the data in the declaration dated 4/16/2003 to support this argument. Specifically, the declaration sets forth 3 examples, with each example utilizing a different combination of substrate material and fibrous filler. These combinations include: 1) aromatic polyamide containing 70% weight boric aluminum; 2) liquid crystal polyester containing 50% weight potassium titanate fibers; and 3) polyether ketone containing 50% by weight glass fibers. These substrates were treated with oxygen, nitrogen, or argon plasma's, after which a copper layer was deposited on the plasma treated substrate. The applicant then provided data as to the adhesive force between the metal layer and the substrate with respect to the type of plasma treatment utilized. In each case, the nitrogen plasma treated substrates exhibited stronger adhesion to the metal layer than those same substrates treated with oxygen or argon plasma.
3. The applicant's argument is unpersuasive because it is not commensurate in scope with the claims. The data provided relates to specific types of substrate materials (polyamides; liquid crystal polyester; polyether ketone); containing specific fillers (glass fibers; aluminum borate fibers; potassium titanate fibers); wherein a specific metal (Cu)

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is deposited after the substrate has been plasma treated. It is specifically noted that the data provided does not provide the dimensions of the fibrous filler utilized.

4. In contrast to the samples provided in the declaration, claim 1 requires a *generic* insulating substrate, containing a *generic* fibrous filler having specific dimensions.

Furthermore, a *generic* metal layer is deposited on the substrate after nitrogen plasma treatment. While claims dependent off of claim 1 further limit either the substrate material or the fibrous filler material, no claims require a combination of a specific substrate material with a specific fibrous filler material. Further, no claims require a specific metal to be use as the metal material.

5. Bearing the above differences in mind, the examiner cannot consider the applicant's argument to be persuasive. Essentially, the data supplied by the applicant in the declaration illustrates that some species within the claimed genus exhibit unexpectedly improved properties when nitrogen plasma is utilized. The applicant has not provided sufficient data to establish that the unexpectedly improved adhesion exhibited by the species will extend to all members of the genus. In other words, there is insufficient evidence to establish that the improved adhesion exhibited by copper plated aromatic polyamide substrates containing 70% weight boric aluminum; liquid crystal polyester substrates containing 50% weight potassium titanate fibers; or polyether ketone substrates containing 50% by weight glass fibers will extend to all insulating substrates coated with any known metal.

6. In addition, applicant's argument of unexpected results is unpersuasive because the data provided in the declaration does not establish that the fibrous fillers utilized in

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the declaration examples meet the dimensional requirements of claim 1. Thus, once again, the data provided in the declaration is not commensurate in scope with the claim language.

7. For the reasons set forth above, applicant's arguments do not place the application in condition for allowance. Further, the applicant showing/arguments do not overcome any of the previous grounds of rejection. Accordingly, the examiner maintains the rejection set forth by the final rejection.

NDU



Paul Thibodeau  
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